

North Shore Marine Terminal – Dock Damage from LCS 21 Docking operation.

To Whom it may concern.

North Shore Marine Terminal is revisiting the incident that occurred during the scheduled sea trial departure on May 4th 2022 and the return on Friday May 6 of LCS 21 to our dock. As the vessel was backing into position it hit the dock in three locations along the existing seawall while attempting to locate a position along the wall and secure the vessel. The points of impact are where the physical damage/ dents to the sea wall occurred, along with the significantly dented corner on the STBD side hull just above the water line.

During these maneuvers it was noted that the vessel's jet drives were in operation and it was displacing a significant amount of water and material from the lake bottom in close proximity and next to our existing seawall.

The damaged dock wall where LCS21 was secured is a deep-water port designed and constructed to accept salt water ships to dock and off load heavy lift cargo on the dock. As described above this is an issue due to the fact that the "toe" material/bottom earth material has been significantly displaced from the sea bed thus undermining the steel sheeting of the sea wall. It was immediately evident that the water jet propulsion systems had washed away the sea floor materials allowing the lower portions of the 55' long steel sheet piling to push out and the dock surface gravel and stone to visibly settle.

This level of thrust continued for some time until the ship was fully secured, even though the ship was pinned to the dock wall with a docking assist tug on the outboard side. It was noted by ship crew that the gas turbines were set to a level of # 7 and # 8 during the evolution. Upon discussing this issue with multiple parties, it was determined that the gas turbines water jet propulsion was also used during the departure of the sea trials on May 4th, also contributing to the damage. Following this unfortunate occurrence, discussions had taken place on the topic including but not limited to NSMT, Lockheed Martin, Navy, and Nav-Sea Personnel.

Shortly following the incident, one of our customers had their tug drafting 7' depth docked at NSMT's dock. They went out with the US Coast Guard on board to conduct there COI inspection. Upon reaching the end of our finger pier adjacent to the LCS's location, they ran aground with the tug. The Coast Guard had inspected the chart and their location verifying the proper position of the tug in the channel, following the path they followed in weeks prior. The grounding was a result of the bottom material displaced during the departure and return using the gas Turbines creating underwater ridges in NSMT's channel.

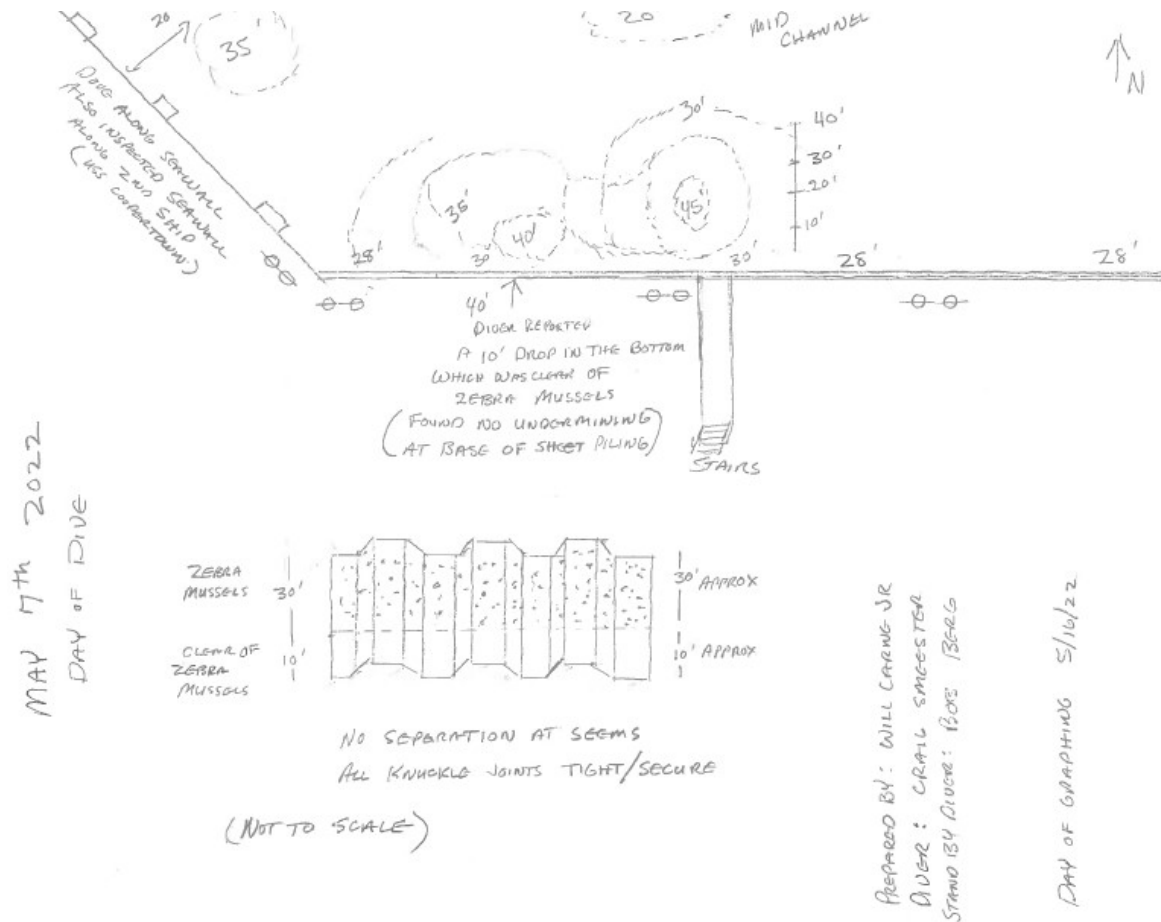
The US NAVY and Lockheed were made aware of the situation and currently we wanted to bring it back to your attention as a few months have passed and we still do not have a resolution or a direction to proceed to get the damage corrected.

After the initial impact on May 6th 2022, we noted the impact areas and also noticed that several hundred feet of the dock surface near the location that the vessel attempted to dock had settled. We immediately scheduled M&M diving to inspect the seawall and bottom and they provided an initial inspection on Saturday May 7th after we received permission from the US Navy to put divers in the water

in proximity of LCS 21. The divers noted in several locations along the seawall that the depth had significantly increased due to displacement of the bottom materials and it was also noted that the underwater seawalls were “blasted clean” where it appears it was receiving significant pressure from the jet drives on the vessel. Depth readings at the wall were at over 45’ in several locations, with significant high/shallow areas now in the dredged channels. The Design Depth is 30’, with an approximate depth of 22’-27’ near the sea wall base for “toe” on the sheet piling. On Wednesday, May 11, a meeting in the pilot house of LCS 21 occurred to discuss with the captain and crew the results of what had occurred the week prior, how to address the damage, and the procedures for departure.

During discussions prior to this occurrence with Lockheed representative Mr. Watts who was the project manager at the time, we agreed on a plan to bring the LCS vessels to our facility safely and created the ground work to make that happen. We made it very clear, and Mr. Watts agreed, that the gas turbines were never to be used near the dock, piers, etc. This again was reiterated repeatedly by Captain Hobbs who has previously performed all the dockings and maneuvering flawlessly when the vessels were under his control. Approximately 10-12 arrivals and or departures had taken place at North Shore Marine terminal’s dock, and Only “main diesel engines” were to be active and or engaged near sea walls, or docks without incident.

As we have stated above, we have not yet obtained any form of engineering studies or required repair solutions to repair the dock seawall. NSMT does not have a monetary value associated with the damages or repairs. An engineering consultant with expertise in seawall construction will need to be hired. This will be the first step in establishing the monetary damages done by activating the LCS gas turbines. Obviously, this will have a cost. We suggest Lockheed Martin issue a purchase order to North Shore for the cost of this consulting. North Shore will contract with a consultant with experience and expertise in restoration of the seawall, adjacent land and dredging necessary to restore North Shore’s dock to its pre May 4th condition. The expectation of the consultant will be to study the problems, propose solutions and act as a liaison to contractors with the knowledge and expertise to perform the work necessary to restore the dock, land and channel. Once cost estimates to correct the damage are procured, NSMT and Lockheed will need to discuss financial arrangements to pay for the work in a timely manner.



Impact Area – at dock edge



Vessel Structural damage at impact point.



Ground Cracks formed minutes after docking cycle.



Ground Cracks – View 2



Ground Cracks – View 3



Divers confirmed that we still have substantial length of our pilings submerged into the bottom and that no material escape is occurring at time of inspection.

We have also been monitoring the existing ground and no settlement has occurred since the original incident. We continue to monitor this in conjunction with our existing operations and the area appears stable for now.

We still need to bring the dock back to original condition; however, the dock can currently be used. The only limitation would be that we should not use the jets during docking operations and should run under diesel (Prop) only with tug support as necessary.

As far as how to proceed we think a Hydrographic survey should be done in the dock and channel area where LCS 21 operated and then compare the bottom elevation results with the original readings prior to the event. This would give us a plan on what the extent of remedial dredging that will be required to put the area back into the original permitted orientation.

Please advise on how to proceed with this, and we appreciate your time in reviewing this again. We want to have this addressed as soon possible as it has been quite a while since any attention has been focused on this issue.

We thank you for your support in this unfortunate situation.

North Shore Marine Terminal